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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,592	11/05/2003	Yoshinori Sakamoto	XA-9951	6414

181 7590 02/10/2005

MILES & STOCKBRIDGE PC  
1751 PINNACLE DRIVE  
SUITE 500  
MCLEAN, VA 22102-3833

EXAMINER

TRAN, MICHAEL THANH

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/700,592

Applicant(s)

SAKAMOTO ET AL.

Examiner

Michael t. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 8-11 is/are allowed.  
6) ☒ Claim(s) 1 is/are rejected.  
7) ☒ Claim(s) 2-4 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

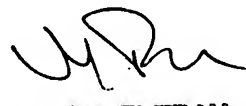
- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 110503.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

  
**MICHAEL TRAN**  
**PRIMARY EXAMINER**

## DETAILED ACTION

1. In response to the Communications dated November 05, 2003, claims 1-4 and 8-11 are active in this application as a result of the cancellation of claims 5-7.

### ***Foreign Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a) (d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

3. The information disclosure statement filed November 05, 2003 has been considered.

### ***Claim Objections***

4. The phrase "applying them", in claim 1, lines 21 and 22, is unclear. Does it means that "applying" all of the voltages at one time or anyone of the voltages? Similar recitations are found in claim 2. Claims 3 and 4 are objected because they depend on objected claim 2.

It appears that the word "wh rein" and "gen rating", in claim 1, line 19, should be changed to -wherein—and -generating--, respectively.

It appears that the word "wher in" and "generat s", in claim 2, line 18, should be changed to -wherein—and -generates--, respectively.

It appears that the word "accumulate d", in claim 8, line 20, should be changed to --accumulated--.

***Claim Rejections – 35 U.S.C. § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claim 1 is rejected, as understood, under 35 U.S.C 102(b) as being anticipated by Haddad et al. [U.S. Patent #5,077,691].

With respect to claim 1, Haddad et al. disclose, in figures 2a and 2b, a nonvolatile memory comprising: a memory array unit [210] having a plurality of nonvolatile memory cells [50's]; a control unit [this is any type of processor unit]; and a voltage generating unit [SW's] for supplying voltages to said nonvolatile memory cells, wherein said nonvolatile memory cells store information corresponding to the quantity of electric charges in a floating gate of each nonvolatile memory cell [see background of the invention section], wherein said control unit controls a write operation to store

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information into said nonvolatile memory cells [see background of the invention section]; a read operation to read information stored in said nonvolatile memory cells; and an erase operation to erase information stored in said nonvolatile memory cells [see background of the invention section], wherein said voltage generating unit has an erase voltage generating unit [SW-G\*] for generating, in accordance with control from said control unit [an erase command], erase voltages to be applied to said nonvolatile memory cells in said erase operation [-17v—12v], and wherein said erase voltage generating unit generates, on the basis of a control signal supplied from said control unit [erase command], erase voltages [-17v- -12v] of two or more levels and applying them to a control gate of each of said nonvolatile memory cells.

### ***Allowable Subject Matter***

7. Claims 8-11 are allowable over the prior art of record.
8. The following is an Examiner's statement of reasons for the indication of allowable subject matter: the prior art of records does not show (in addition to the other elements in the claim) the following:
  - Wherein, during the period of said second operation, the voltage generated by said voltage generating circuit is varied twice or more, so as to keep the voltage applied to said first insulating film within a predetermined voltage range.

### ***Conclusion***

9. When responding to the Office action, Applicants are advised to provide the

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Examiner with line and page numbers of the application and/or references cited to assist the Examiner in the prosecution of this case.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael T. Tran whose telephone number is (571) 272-1795. The Examiner can normally be reached on Monday-Thursday from 7:30-6:00 P.M.

11. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1650.



Michael T. Tran  
Art Unit 2818  
February 4, 2005

**MICHAEL TRAN**  
**PRIMARY EXAMINER**